

ABSTRACT OF THE INVENTION

[0058] The CA125 gene has been cloned and multiple repeat sequences as well as the carboxy terminus have been identified. The CA125 molecule comprises three major domains: an extracellular amino terminal domain (Domain 1); a large multiple repeat domain (Domain 2);
5 and a carboxy terminal domain (Domain 3) which includes a transmembrane anchor with a short cytoplasmic domain. The amino terminal domain is assembled by combining five genomic exons, four very short amino terminal sequences and one extraordinarily large exon. This domain is dominated by its capacity for O-glycosylation and its resultant richness in serine and threonine residues. Additionally, an amino terminal extension is present, which comprises four
10 genomic exons. The amino acid composition of the amino terminal extension was found to be consistent with the amino acid composition of the amino terminal domain. The molecular structure is dominated by a repeat domain comprising 156 amino acid repeat units, which encompass the epitope binding sites. More than 60 repeat units have been identified, sequenced, and contiguously placed in the CA125 domain structure. More specifically, this invention is
15 directed to a CA125 cDNA sequence which can be introduced into animal or human cells to achieve transcription or expression of the cDNA.

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